The International Space Station Program

The International Space Station is the most capable laboratory and spacecraft ever designed for supporting humans in space. Our mission in the International Space Station Program is to build and operate a permanently occupied microgravity research facility, around the clock, for many years to come. The station is being built and operated by a partnership of five space agencies representing 16 nations, and our job is to integrate and manage that station.

If you want to work with us you must be able to work in an international environment; think strategically; and be familiar with overall engineering and architectural planning and implementation, systems engineering integration, software and hardware development and testing, risk assessment, and issue resolution.

ISS Vehicle Management We provide technical and management oversight for designing, integrating, developing, manufacturing, testing, verifying, and sustaining aspects of critical International Space Station elements.

Mission Integration and Operations We establish policies, concepts, processes, templates, plans, and requirements related to all mission integration and operations. Our job includes tactical planning, resource allocations, stowage, imagery, launch integration, management of crew and ground personnel training facilities, flight procedures, and many other mission operations standards and requirements.

Avionics and Software We provide issue resolution for major software/avionics challenges on the International Space Station. We have the technical expertise for avionics and software design, and major technical integration and engineering coordination between NASA and the international partners at the system, element, and component level.

Safety and Mission Assurance/Program Risk
We develop and implement plans and processes that will ensure that safety, reliability, maintainability, and quality assurance requirements are met at the element and integrated stage levels. We perform qualitative and quantitative risk assessment techniques to identify, understand, and control and mitigate risks.

International Partners We establish and coordinate interfaces and liaison offices with our international partners. We also provide guidance relative to policies and procedures defined in legal and program documentation, monitor program milestones, and coordinate issues and resolutions between NASA and international management.

Payloads We enable the integration of International Space Station-funded research and foster the use of the station as a laboratory for exploring the nature of physical phenomena. We further manage the research manifest; fund, allocate, and utilize program resources; and engineer integration and operations.

Typical Degrees Aerospace, Mechanical, Electrical/Electronic Engineering, plus at least five years' professional experience in the aerospace industry

The Space Shuttle Program

After 20 years of flight, the Space Shuttle is still the most capable and sophisticated human spacecraft ever built, and it's a world-famous symbol of U.S. pride and achievement. By its daring and grace, the Space Shuttle has made feats once believed impossible appear routine.

But no day in the Space Shuttle Program is routine. Thousands of components built in cities from coast-to-coast must come together perfectly, time and again, to ensure the Space Shuttle will have a safe and successful liftoff. Whether it's launching a laboratory from Japan to the International Space Station, sending a probe to the outer solar system, or upgrading the Hubble Space Telescope, each Space Shuttle flight is unique and challenging. The Space Shuttle operates on the edge of human technology and exploration, and you can, too.

Our work nationwide is managed here at the Johnson Space Center. Our responsibilities include managing day-to-day preparations for each mission, managing the designs and plans for the launching and operation of payloads on board the Space Shuttle, reviewing the status of flight preparations and resolving problems from landing to liftoff, and recommending and managing technology upgrades that continually improve the safety of the Space Shuttle fleet.

The Space Shuttle is not just a piece of equipment. It's a huge and complex collection of systems, almost any one of which you could have a hand in testing, maintaining, or improving. The Space Shuttles of today may look just like Columbia did when it launched in 1981; but underneath, the systems and hardware from the cockpit to the main engines have undergone many changes and improvements. The world's only fleet of reusable space vehicles doesn't remain one of the most technologically advanced flying laboratories without the help of many people finding ways to keep it safe and make it better.

So why not you? We need people with all types of skills to keep the Orbiters of today flying with success, and to make those of tomorrow even safer, and more reliable and efficient.

Typical Degrees: Aerospace, Aeronautical, Mechanical, Electrical, Structural Engineering, plus at least five years of experience in the aerospace industry

The Space Shuttle has flown more than 450 million miles since first launched in 1981. The Space Station travels more than 12 million miles each month.